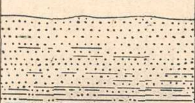


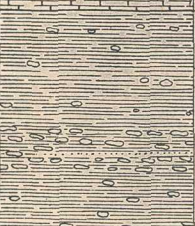

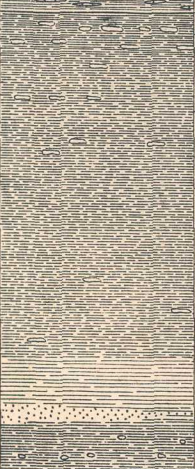
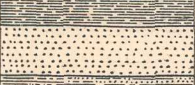









COLUMNAR SECTION

GENERALIZED SECTION FOR THE DEVILS TOWER QUADRANGLE.										
SCALE: 1 INCH = 500 FEET.										
SYSTEM	SERIES	FORMATION NAME.	SYMBOL.	THICKNESS IN FEET.	COLUMNAR SECTION.	DEPTH TO TOP OF DAKOTA SAND- STONE.	CHARACTER OF ROCKS.	CHARACTER OF TOPOGRAPHY AND SOILS.		
CRETACEOUS	UPPER CRETACEOUS	Fox Hills sandstone	Kfh	250		3800 3600	Massive buff sandstone, mostly soft.	Rolling hills and rounded ridges. Sandy soil with good grass.		
		Pierre shale.	Kp	1500		3400 3200 3000 2800 2600 2400 2200	Soft, dark-gray shale and clay with oval concretions.	Wide plains with shallow valleys. Thin clayey and not very fertile soil, supporting fair growth of grass.		
		Niobrara formation.	Kn	80-120		2000	Light-gray limy shale; weathers straw color.	Shale slopes. Limy soil.		
		Carlile formation.	Kcr	620		1800 1600 1400	Gray shale with oval concretions and thin sandstone.	Rolling hills with thin clay soil, mostly covered with grass.		
		Greenhorn formation.	Kg	60-80			Shale with impure concretionary limestone.	Small bare ridges.		
		Graneros shale.	Kgr	1250		1200 1000 800 600 400 200 0	Black shale with concretions.	Wide valleys containing extensive alluvial deposits.		
		(Mowry member.)	(Kmr)				Hard gray shale containing many fish scales. Massive sandstone.	Bare shaly ridges, partially wooded.		
							Gray to black shale with small concretions.	Valleys with clay soil and "badlands"		
		Dakota sandstone.	Kd	70-100			Gray to buff sandstone, mostly very massive; weathers reddish brown.	Plateaus, canyons, and high cliffs with rocky slopes. Thin sandy soil.		
		Fuson formation.	Kf	50-100			Shale and sandy shale with local sandstone.	Slopes below cliffs of Dakota sandstone.		
		Lakota sandstone.	Klk	25-50			Light-colored, coarse, massive sandstone.	Canyons with steep cliffs. Thin sandy soil.		
		Morrison shale.	Km	40-160			Massive, pale greenish-gray to maroon shale with limestone nodules.	Steep slopes below cliffs of Dakota sandstone.		
		TRI-ASSIC?	JURASSIC	Sundance formation.	Jsd	340			Yellowish, soft sandstone (Unkpapa?). Greenish-gray shale with thin limestones, reddish near base. Massive, buff, ripple-marked sandstone. Dark-gray shale.	Long, gentle slopes, mostly sodded.
				Spearfish formation.	Fs	200+			Red sandy shale and soft red sandstone with gypsum deposits.	Wide valleys with rocky slopes. Soil thin and barren.

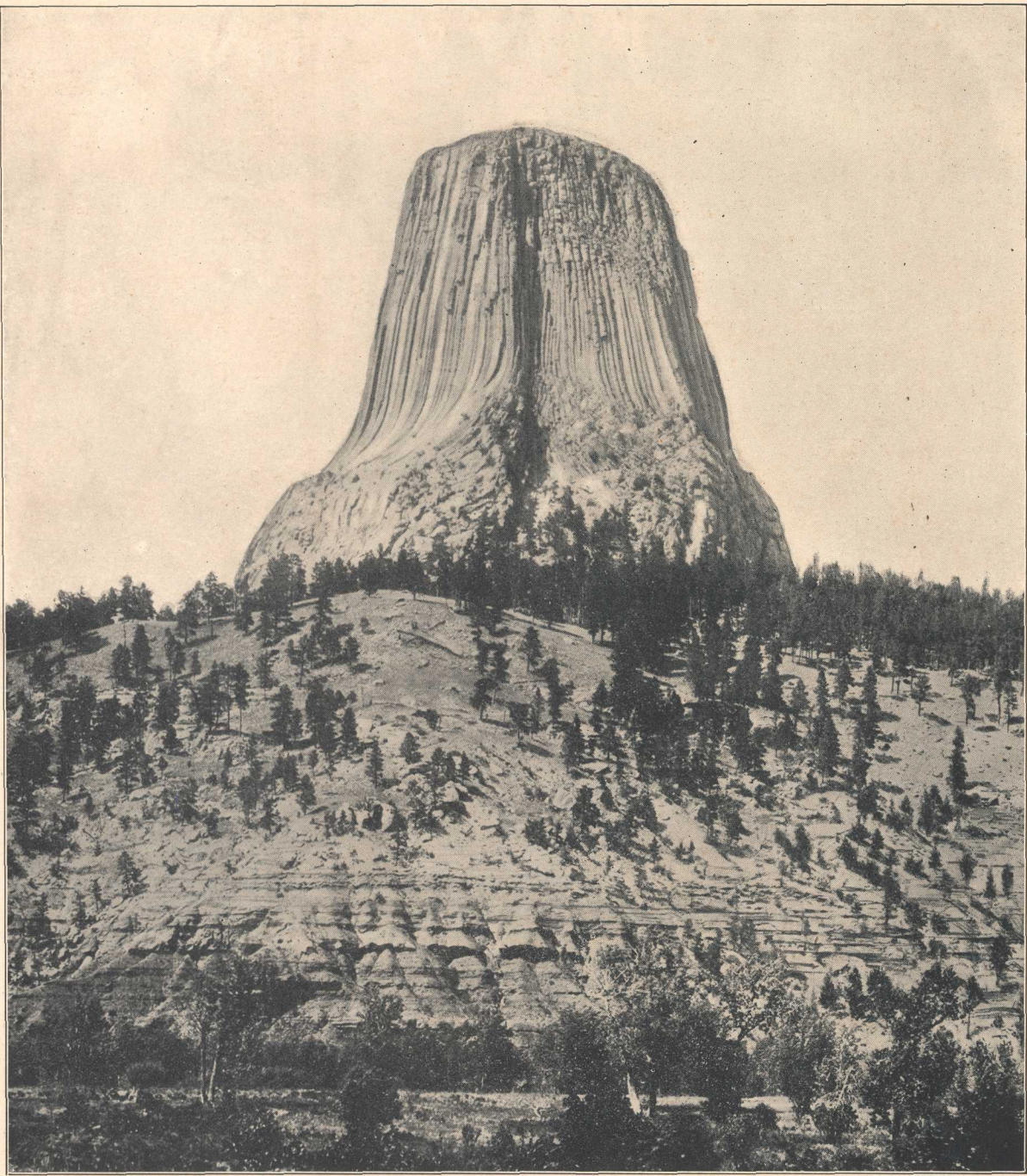


FIG. 1.—DEVILS TOWER FROM THE EAST.

The igneous rock of the tower rests on Sundance formation. The cliffs below are red shale of Spearfish formation.

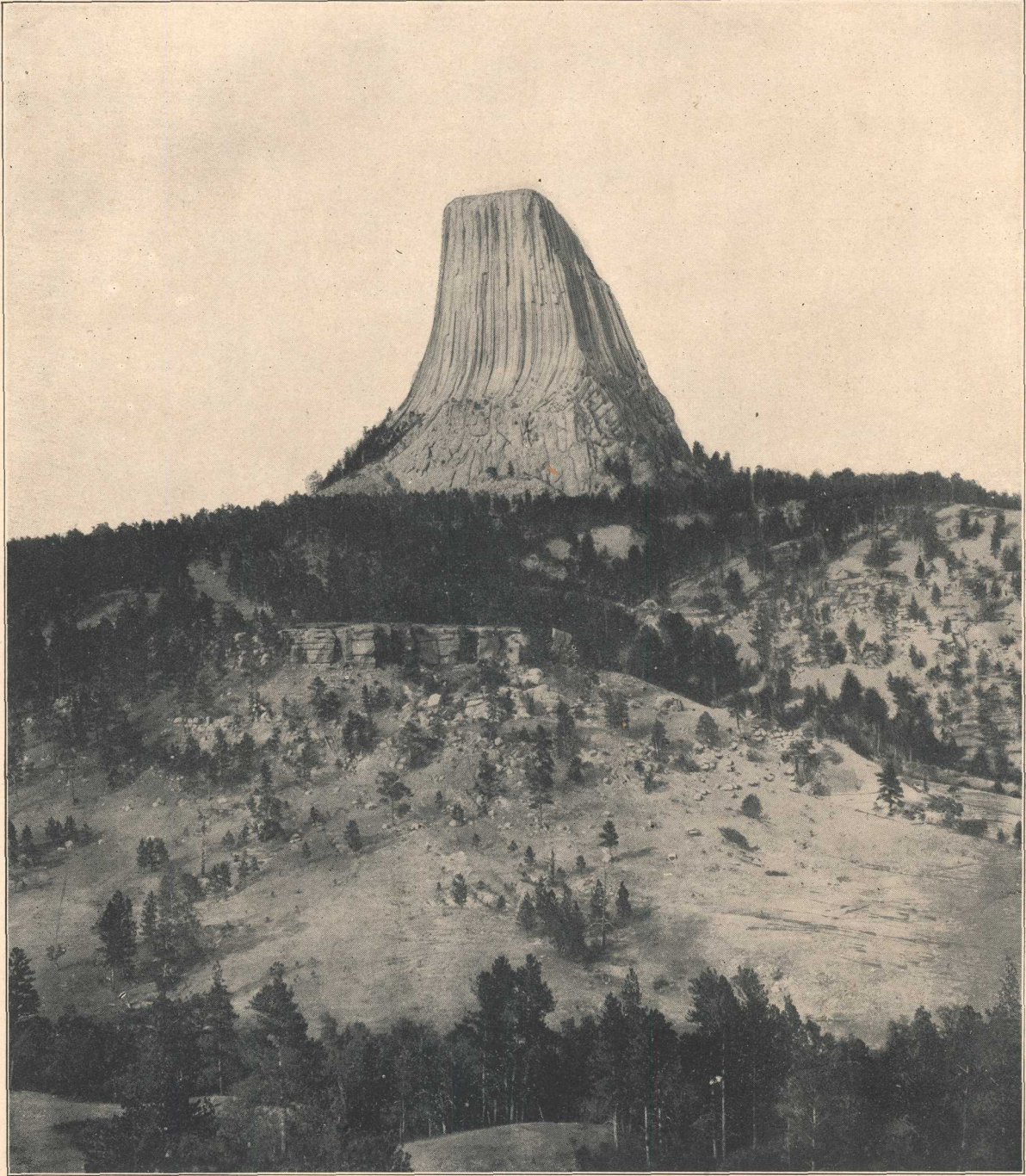


FIG. 2.—DEVILS TOWER FROM THE NORTH.

The slopes below are Sundance formation, the lower sandstone of which outcrops in the cliff near middle of view.